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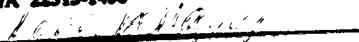
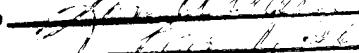
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 10/764,834
Applicant: : Bastiaan Driehuys
Filed : Jan. 26, 2004
TC/A.U. : 3744
Examiner: : To Be Assigned

Docket No. : PM9746CON
Customer No. : 36335

Confirmation No. 7917

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

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Date 

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT
CITATION UNDER 37 C.F.R. § 1.97**

Sir:

Attached is a list of documents on Form PTO-1449. The present application is a continuation application to application number 09/953,668, and the prior art cited in the parent applications should be taken into consideration in the present application. In accordance with MPEP §2001.06(b), no copies of the prior art in the parent applications are submitted herewith. Confirmation that the prior art cited in the parent application has been considered in the next Official Action is most respectfully requested

Respectfully submitted,



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I:\IP\Information Disclosure Form 1449\PM\PM9746 (01-26-2005).doc

FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office				Attorney Docket Number PM9746CON			Serial No.: 10/764,834
LIST OF DOCUMENTS CITED BY APPLICANT (Use several sheets if necessary)				Applicant Bastiaan Driehuys et al.			
				Filing Date January 26, 2004			Group 3744
U. S. PATENT DOCUMENTS							
Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	1.	3,748,864	07/1993	Lofredo et al.	62	22	
	2.	4,080,429	03/1978	Koeppe et al.	423	262	
	3.	4,369,048	01/1983	Pence	55	66	
	4.	4,417,909	11/1983	Weltner, Jr.	62	12	
	5.	4,586,511	05/1986	Clark, Jr.	128	653	
	6.	4,599,462	07/1986	Michl	568	702	
	7.	4,755,201	07/1988	Eschwey	62	12	
	8.	4,977,749	12/1990	Sercel	62	51.1	
	9.	5,007,243	04/1991	Yamaguchi et al.	62	51.1	
	10.	5,039,500	08/1991	Shino et al.	423	262	
	11.	5,161,382	11/1992	Missimer	62	46.1	
	12.	5,545,396	08/1996	Albert et al.	424	93	
	13.	5,612,103	03/1997	Driehuys et al.	428	34.7	
	14.	5,617,860	04/1997	Chupp et al.	128	653.4	
	15.	5,642,625	07/1997	Cates, Jr. et al.	62	55.5	
	16.	5,809,801	09/22/98	Cates, Jr. et al.	62	637	
	17.	5,860,295	01/19/99	Cates, Jr. et al.	62	637	
	18.	5,934,103	08/10/99	Ryan et al.	62	637	
	19.	6,079,213	06/27/00	Driehuys et al.	62	3.1	
	20.	6,085,743	07/11/00	Rosen et al.	128	200.24	
	21.	6,134,914	10/24/00	Eschwey et al.	62	637	
	22.	5,936,404	08/10/99	Ladebeck et al.	324	300	
	23.	6,128,918	10/10/00	Deaton et al.	62	610	

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Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Subclass	Translation Yes No
24.		PCT/US97/05084	3/97	PCT			
25.		PCT/US97/05004	3/97	PCT			
26.		PCT/US97/05166	3/97	PCT			
27.		WO 99/17105	08/04/99	PCT			
28.		WO 97/29836	21/04/97	PCT			X
29.		WO00/23797	27/04/00	PCT			
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
30.	Abstract, "Breathe (xenon) deeply to see lungs clearly; inert gas xenon may make magnetic resonance imaging more effective in visualizing brain and lung tissues, PROMT - Predicasts: PM1						
31.	Albert et al., " ¹²⁹ Xe Relaxation Catalysis by Oxygen", Abstracts of the 11th Annual Meetings of the Society for Magnetic Resonance Medicine, (1992).						
32.	Albert et al., "Relaxation of ¹²⁹ Xe in Model Biological Systems: On Probing the Mechanism of General Anesthesia", Abstracts of the 11th Annual Meetings of the Society for Magnetic Resonance Medicine, (1992).						
33.	Albert, "Measurement of ¹²⁹ Xe T1 in blood to explore the feasibility of hyperpolarized sup ¹²⁹ Xe MRI," Jour. Comp. Ass. Tomography, Vol. 19, No. 6 (Nov.-Dec. 1995).						
34.	Becker et al., "Study Of Mechanical Compression Of Spin-Polarized ³ He Gas", Nuclear Instruments and Methods In Physics Research, Vol. A 346, pp. 45-51 (1994).						
35.	Bhaskar et al., "Efficiency of Spin Exchange between Rubidium Spins and ¹²⁹ Xe Nuclei in a Gas", Physical Review Letters, Vol. 49, p. 25 (1982).						
36.	Borman, "Xenon used to expand magnetic imaging, Chem. & Eng. News, Vol. 72, No. 30, pp. 7-8 (7/25/94).						
37.	Cates et al., "Laser Production of Large Nuclear-Spin Polarization in Frozen Xenon", Phys. Rev. Lett., vol. 65, No. 20, pp. 2591-2594 (1990).						
38.	Cates et al., "Rb- ¹²⁹ Xe spin-exchange rates due to binary and three-body collisions at High Xe pressures", Physical Review A, Vol. 45, p. 4631 (1992).						
39.	Cummings et al., "Optical pumping of Rb vapor using high-power Ga _{1-x} A _x As diode laser arrays", Phys. Rev. A, Vol. 51, No. 6, pp. 4842-4851 (1995).						

EXAMINER
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40.	Driehuys et al., "High-volume production of laser-polarized ¹²⁹ Xe", Appl. Phys. Lett., Vol. 69, No. 12 (1996).		
41.	Gatzke et al., "Extraordinarily Slow Nuclear Spin Relaxation in Frozen Lazer-Polarized ¹²⁹ Xe", Phys. Rev. Lett., Vol. 70, No. 5, pp. 690-693 (1993).		
42.	George, "The sharper image: MRIs and xenon gas," Jour. of NIH Res., Vol. 6, No. 12, pp. 42-44 (December 1994).		
43.	Kaatz, "Comparison of molecular hyperpolarizabilities from gas and liquid," Jour. Chemical Physics, Vol. 108, No. 3, pp. 849-856 (1/15/98).		
44.	Martin, "The pharmacokinetics of hyperpolarized xenon: implications for cerebral MRI," Jour. Magn. Reson. Imag., Vol. 7, No. 5, pp. 848-854 (Sep.-Oct. 1997).		
45.	Mazitov et al. "A simple method for producing liquid or solid NMR samples containing dissolved gases at elevated pressures," Rev. Sci. Instrum., 65 (6), pp. 2149-2150 (June 1994).		
46.	Middleton et al., "MR Imaging With Hyperpolarized ³ He Gas", Magnetic Resonance In Medicine, Vol. 33, pp. 271-275 (1995).		
47.	Middleton, "The Spin Structure of The Neutron Determined Using A Polarized ³ He Target", Ph.D. Dissertation, Princeton University (1994).		
48.	Miller et al., "Xenon NMR: Chemical shifts of a general anesthetic common solvents, proteins, and membranes", Proc. of the Nat. Academy of Science (USA), Vol. 78, No. 8 (1981).		
49.	Mugler, "MR imaging and spectroscopy using hyperpolarized ¹²⁹ Xe gas: preliminary human results," Mag. Reson. Med., Vol. 37, No. 6, pp. 809-815 (June 1997).		
50.	Patyal, "Longitudinal relaxation and diffusion measurements using magnetic resonance signals from laser-hyperpolarized ¹²⁹ Xe nuclei," J. Magn. Reson., Vol. 126, No. 1, pp. 58-65, May 1997.		
51.	Raftery, D. et al., "NMR of optically pumped xenon thin films", Chem. Phys. Lett., Vol. 191, pp. 385-390 (1992).		
52.	Sauer et al., "Laser Polarized Liquid Xenon", Chem. Phys. Lett., Vol. 277, pp. 153-158 (1997).		
53.	Wagshul, "In vivo MR imaging and spectroscopy using hyperpolarized ¹²⁹ Xe," Magn. Reson. Med., Vol. 36, No. 2, pp. 183-191 (August 1996).		
54.	Wilson, E.K., "Hyperpolarized Gases Set NMR World Spinning", Chem. & Eng. News, Vol. 74, No. 52, pp. 21-24 (12/23/96).		
55.	Zeng et al., "Experimental determination of the rate constants for spin exchange between optically pumped K, Rb, and Cs atoms and ¹²⁹ Xe nuclei in alkali-metal--noble-gas van der Waals molecules", Physical Review A, Vol. 31, p. 260 (1985).		
56.	Bock, "Simultaneous T ₂ * and Diffusion Measurements with ³ He," Mag. Reson. In Med., Vol. 38, No. 6, pp. 890-895 (1997).		
57.	Cates, "New Results from Spin-Exchange Optical Pumping," Am. Inst. Phys. pp. 3-15 (1998).		

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58.	Colegrove et al., "Polarization of He ³ Gas by Optical Pumping,: Phys. Rev., Vol. 132, No. 6, pp. 2561-2572 (1963).		
59.	Driehuys et al., "Surface Relaxation Mechanisms of Laser-Polarized ¹²⁹ Xe," 74 Phys. Rev. Lett., No. 24, pp. 4943-4946 (12 June 1995).		
60.	Happer et al., "An Optical Pumping Primer," Hyperfine Interactions, Vol. 38, pp. 435-470 (1987).		
61.	Happer et al., "Polarization of the nuclear spins of noble-gas atoms by spin exchange with optically pumped alkali-metal atoms," Phys. Rev. A, Vol. 29, No. 6, p. 3092-3110 (June 1984).		
62.	Heil et al., "Very long nuclear relaxation times of spin polarized helium 3 in metal coated cells," Physics Letters A 201, pp. 337-343 (1995).		
63.	Pietraß et al., "Optically Polarized ¹²⁹ Xe in NMR Spectroscopy," Advanced Materials, pp. 826-838 (1995)		
64.	Saam et al., "Nuclear Relaxation of ³ He in the Presence of O ₂ ," Phys. Rev. A, Vol. 52, pp. 862-865 (1995).		
65.	Song et al., "Spin-Polarized ¹²⁹ Xe Gas Imaging of Materials," J. Mag. Reson., Series A 115, pp. 127-130 (1995).		
66.	Surkau et al., "Large hyperpolarized ³ He quantities for ³ He-MRI of the lung," Proceedings of the Int'l Soc. for Mag. Res. In Med., 5th Sci. Mtg. and Exh, Vancouver, BC, Canada (April 12-18, 1997)		
67.	Susskind, H. et al., "Xenon-127 Ventilation Studies," Prog. Nucl. Med., 5:144 (1978).		
68.	Yonehara et al., "Design of Rb Cell for Polarized ³ He Ion Source Based on Electron Pumping," The 11th Symp. on Accelerator Sci. & Tech., Harima Sci. Garden City, pp. 174-175 (1997).		

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